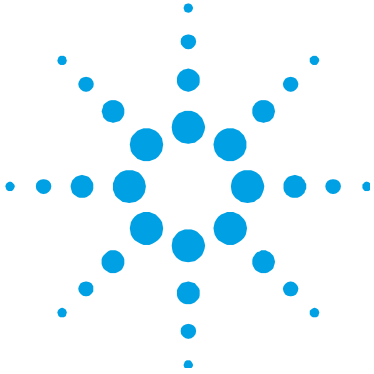

TV 141 Navigator Vent Valve

Model
969-9834

Manuale di Istruzioni
Bedienungshandbuch
Notice de Mode D'Emploi
User Manual

87-900-911-01 (F)
04/2011

Agilent Technologies

Notices

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WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

TV 141 Navigator Vent Valve

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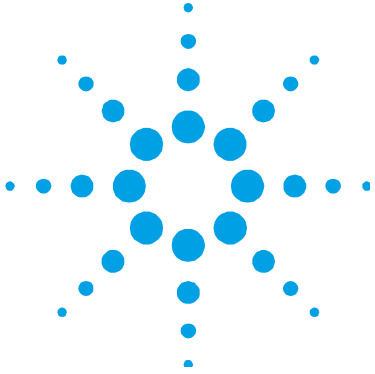

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Generalità

Il kit "TV 141 Navigator Vent Valve" comprende un'unità di controllo ed una valvola, che realizzano un sistema completo per la ventilazione automatica della pompa nella fase di spegnimento o nel caso si verifichi una caduta di tensione. La valvola in condizioni di riposo (senza alimentazione) è normalmente aperta. L'attivazione avviene in modo elettromagnetico, mentre il fissaggio (Viton-sealed) viene realizzato tramite un raccordo di tipo M8 con relativo O-ring sul foro per alto vuoto della pompa. L'aria di ingresso nella valvola, viene filtrata tramite un opportuno filtro presente sull'ingresso aria della valvola stessa.

L'unità di controllo viene alimentata dal governo Turbo-V che non è predisposto per il montaggio su rack.

L'unità di controllo viene attivata con un ritardo prefissato di circa 0,8 secondi per evitare ventilazioni inopportune durante una caduta di tensione temporanea e per permettere la chiusura delle valvole di sistema prima della ventilazione.

Caratteristiche tecniche

Unità di controllo

Tensione di ingresso	24 Vdc ± 10%
- potenza (max)	2,5 W
Tensione di uscita (max)	24 Vcc ± 10%
- potenza (max)	1,2 W
Ritardo	circa 0,8 secondi
Temperatura operativa	da 0 a 40 °C
Temperatura di immagazzinamento	da -20 a 50 °C

Cavi di connessione

Ingresso	120 mm (4,72 inch)
Uscita dalla valvola	200 mm (7,87 inch)

Vent valve

Stato valvola	Normalmente aperta (chiusa quando viene alimentata)
Connessione di vuoto	Raccordo M8
Filtro ingresso aria	Bronzo sinterizzato
Dimensione foro	1,2 mm (0,05")
Gamma di pressioni	da 10^{-6} mbar a 1 bar (da 10^{-7} Torr a 760 Torr)
Adattatore ingresso aria	Ø 6,35 mm (¼ inch)
Leak rate	≤ 1x10^{-7} mbar l/s
Vita	1 milione di cicli
Tensione di ingresso	24 Vdc ± 10%
Potenza	2,5 W
Temperatura di bakeout	60 °C
Peso	140 g (0,3 lbs)

La figura seguente riporta le dimensioni di ingombro della valvola.

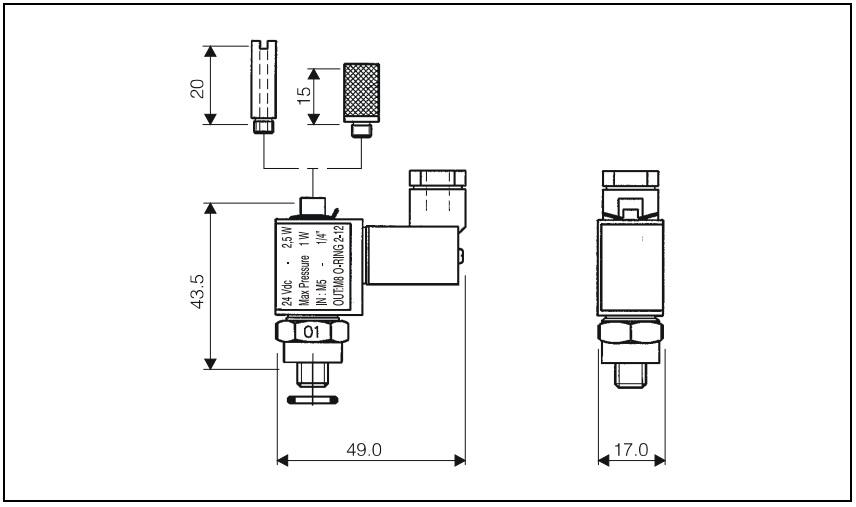


Figura 1 Dimensioni in mm

Installazione

In figura sono riportati i vari componenti presenti nel Kit TV 141 Navigator Vent Valve. Tali componenti sono forniti disassemblati; sarà quindi cura del cliente provvedere all'assemblaggio del Kit.

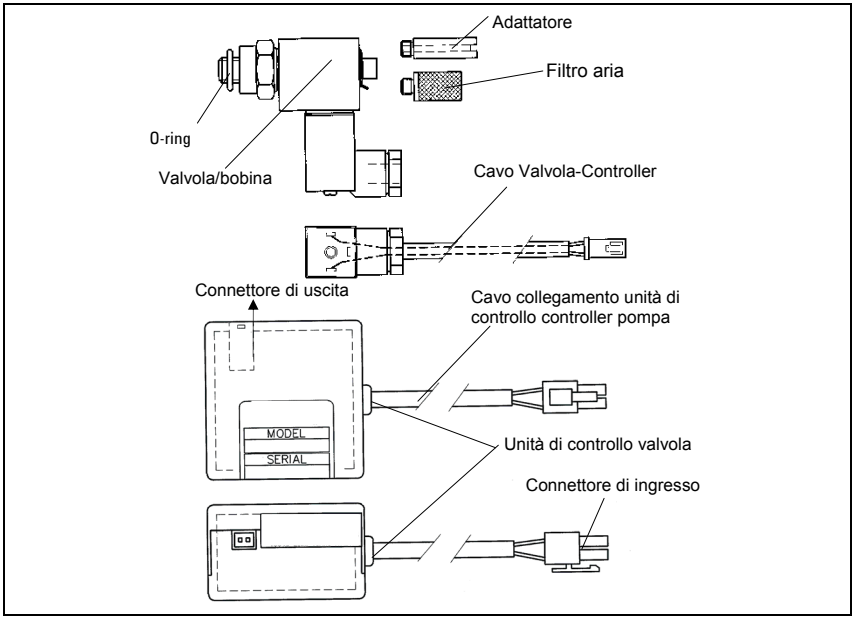


Figura 2 Componenti del Kit

ATTENZIONE! Durante la fase di assemblaggio del kit, fare attenzione a non svitare la ghiera ed il dado di fissaggio della bobina interna alla valvola.

Completato l'assemblaggio, procedere con l'installazione

Rimuovere il tappo a vite presente sulla pompa, quindi fissare la valvola alla pompa utilizzando una chiave esagonale da 16 mm, avendo cura di serrare il dado con una coppia pari a 2,5 Nm.

La figura seguente riporta un esempio d'installazione.

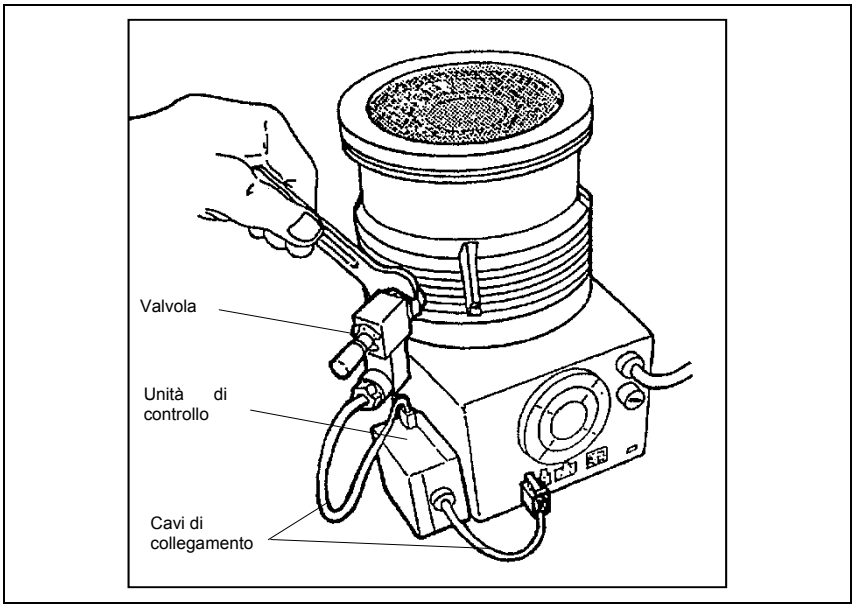


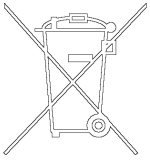
Figura 3 Installazione

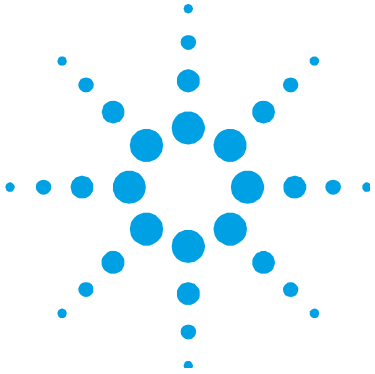
ATTENZIONE! Per evitare danneggiamenti della pompa, non serrare il dado con una coppia maggiore a 2,5 Nm.

Dopo aver completato l'installazione meccanica, collegare il cavo di collegamento dalla valvola all'unità di controllo, ed il cavo di collegamento dall'unità di controllo dell'elettrovalvola al controller della pompa. Per fissare la scatola del controller, utilizzare il velcro in dotazione.

Smaltimento

Significato del logo "WEEE" presente sulle etichette. Il simbolo qui sotto riportato è applicato in ottemperanza alla direttiva CE denominata "WEEE". Questo simbolo **(valido solo per i paesi della Comunità Europea)** indica che il prodotto sul quale è applicato, NON deve essere smaltito insieme ai comuni rifiuti domestici o industriali, ma deve essere avviato ad un sistema di raccolta differenziata. Si invita pertanto l'utente finale a contattare il fornitore del dispositivo, sia esso la casa madre o un rivenditore, per avviare il processo di raccolta e smaltimento, dopo opportuna verifica dei termini e condizioni contrattuali di vendita.





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Übersetzung der Originalanleitungen

Allgemeines

Die Baugruppe “TV 141 Navigator Vent Valve” umfaßt eine Steuereinheit und ein Ventil, die ein komplettes System zur automatischen Belüftung der Pumpe beim Ausschalten oder bei Spannungsabfall darstellen. In Ruhestellung (ohne Versorgung) ist dieses Ventil normalerweise geöffnet. Es wird elektromagnetisch betätigt, während die Befestigung (Viton-sealed) durch einen Anschluß Typ M8 mit entsprechendem O-Ring an der Bohrung für Hochvakuum der Pumpe erfolgt. Die Eintrittsluft in das Ventil wird durch einen entsprechenden Filter am Lufteinlauf des Ventils gefiltert.

Die Steuereinheit wird durch eine Turbo-V-Steuerung versorgt, die nicht zur Montage auf dem Baugruppenträger vorgesehen ist.

Die Steuereinheit wird mit einer auf ca. 0,8 Sekunden voreingestellten Verzögerung eingeschaltet, um eine unerwünschte Belüftung bei zeitweisem Spannungsabfall zu verhindern und um das Schließen der Ventile des Systems vor der Belüftung zu ermöglichen.

Technische Daten

Steuereinheit

Eingangsspannung	24 Vdc ± 10%
- Leistung (max)	2,5 W
Ausgangsspannung (max)	24 Vcc ± 10%
- Leistung (max)	1,2 W
Verzögerung	ca. 0,8 Sekunden
Betriebstemperatur	von 0 bis 40 °C
Lagerungstemperatur	von -20 bis 50 °C

Anschlußkabel

Eingang	120 mm (4,72 inch)
Ausgang vom Ventil	200 mm (7,87 inch)

Vent valve

Ventilzustand	Normalerweise offen (bei Versorgung geschlossen)
Vakuumzuleitung	M8-Anschluß
Lufteingangsfilter	Sinterbronze
Bohrungsdurchmesser	1,2 mm (0,05")
Druckwerte	von 10^{-6} mbar bis 1 bar (von 10^{-7} Torr bis 760 Torr)
Adapter Lufteintritt	Ø 6,35 mm (¼ inch)
Leak rate	≤ $1x10^{-7}$ mbar l/s
Lebensdauer	1 Million Zyklen
Eingangsspannung	24 Vdc ± 10%
Leistung	2,5 W
Bakeout-Temperatur	60 °C
Gewicht	140 g (0,3 lbs)

Aufnachstehender Abbildung sind die Abmessungen des Ventils angegeben.

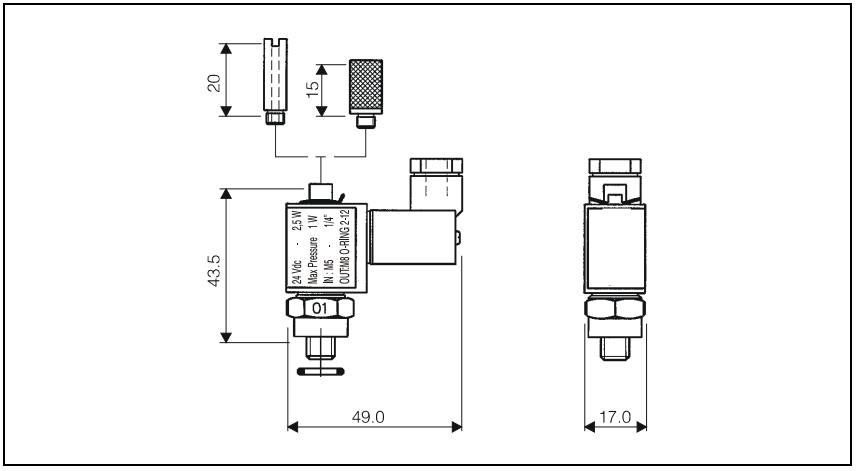


Abbildung 1 Abmessungen in mm

Installation

In der Abbildung sind die verschiedenen Bauteile der Baugruppe TV 141 Navigator Vent Valve dargestellt. Diese Bauteile werden lose geliefert und müssen daher vom Kunden zusammengebaut werden.

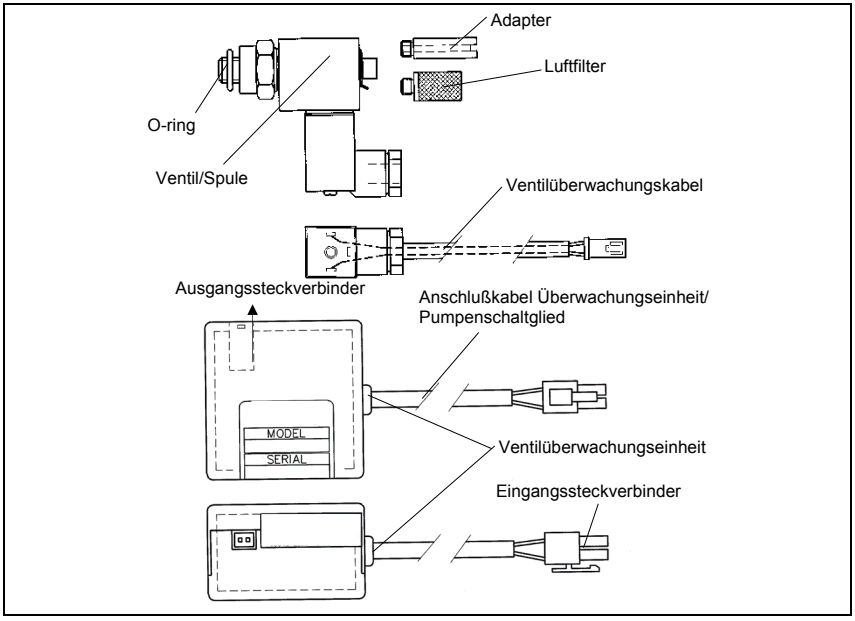


Abbildung 2 Bauteile der Baugruppe

VORSICHT! Beim Zusammenbau der Baugruppe dürfen der Gewindering und die Befestigungsmutter der Spule im Ventilinneren nicht losgeschraubt werden.

Nach dem Zusammenbau, Installation vornehmen. Verschlußschraube an der Pumpe entfernen, danach Ventil unter Verwendung eines Imbusschlüssels zu 16 mm an der Pumpe befestigen, indem darauf zu achten ist, daß die Mutter mit einem Anziehmoment von 2,5 Nm festgezogen wird.

Nachfolgende Abbildung stellt ein Installationsbeispiel dar.

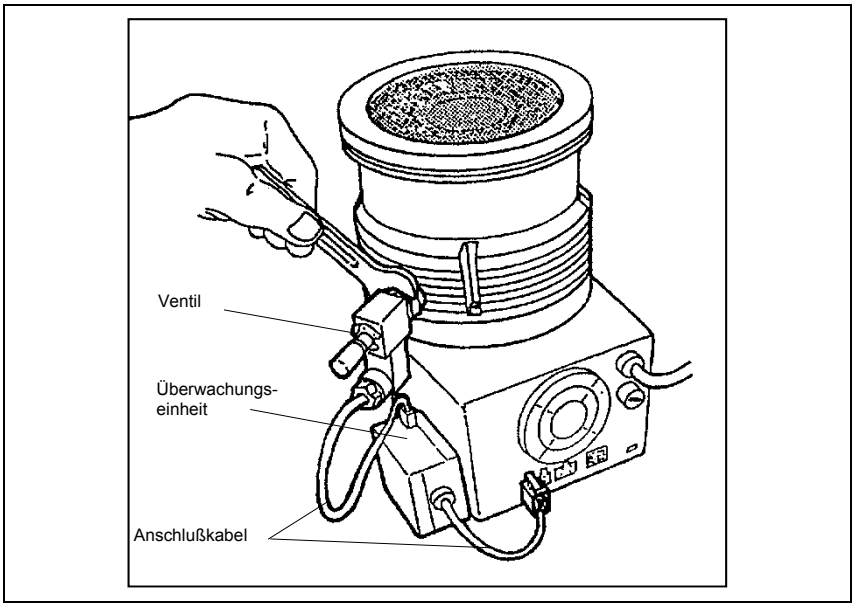


Abbildung 3 Installation

VORSICHT! Um Beschädigungen der Pumpe zu vermeiden, die Mutter nicht mit einem Anziehmoment höher als 2,5 Nm festziehen.

Nach Abschluß der mechanischen Installation, Verbindungskabel vom Ventil zur Überwachungseinheit, sowie Verbindungskabel von der Überwachungseinheit des Elektroventils zum Schaltglied der Pumpe anschließen. Zum Befestigen des Schaltgehäuses, beigefügtes Klettband verwenden.

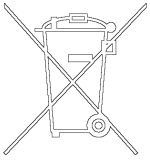
Entsorgung

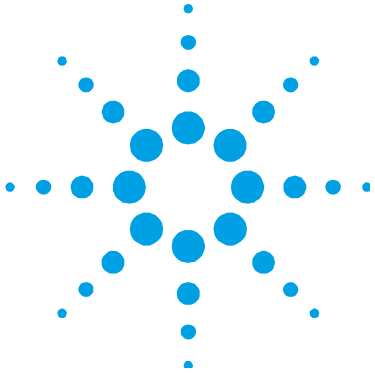
Bedeutung des "WEEE" Logos auf den Etiketten.

Das folgende Symbol ist in Übereinstimmung mit der EURichtlinie WEEE (Waste Electrical and Electronic Equipment) angebracht.

Dieses Symbol **(nur in den EU-Ländern gültig)** zeigt an, dass das betreffende Produkt nicht zusammen mit Haushaltsmüll entsorgt werden darf sondern einem speziellen Sammelsystem zugeführt werden muss.

Der Endabnehmer sollte daher den Lieferanten des Geräts - d.h. die Muttergesellschaft oder den Wiederverkäufer - kontaktieren, um den Entsorgungsprozess zu starten, nachdem er die Verkaufsbedingungen geprüft hat.





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Traduction de la mode d'emploi originale

Généralités

Le kit "TV 141 Navigator Vent Valve" est composé d'une unité de commande et d'une valve qui forment un dispositif complet pour la ventilation automatique de la pompe pendant la phase d'extinction ou en cas de chute de tension. La valve en état de repos (non alimentée) est normalement ouverte. L'activation est réalisée d'une manière électromagnétique, alors que la fixation (Viton-sealed) est réalisée au moyen d'un adaptateur de type M8 doté d'un joint torique situé sur l'orifice pour vide poussé de la pompe. L'air en entrée de la valve est filtré au moyen d'un filtre monté sur l'entrée d'air de la valve même.

Le dispositif de commande Turbo-V, qui n'est pas conçu pour le montage sur support, alimente l'unité de commande du système.

L'unité de commande est activée avec un retard prédéfini de 0,8 secondes environ, pour éviter toute ventilation inopportune en cas de chute de tension temporaire et pour permettre la fermeture des valves de système avant la ventilation.

Caractéristiques techniques

Unité de commande

Tension en entrée	24 Vdc ± 10%
- puissance max.	2,5 W
Tension de sortie max.	24 Vcc ± 10%
- puissance max.	1,2 W
Retard	0,8 secondes environ
Température de service	0 à 40 °C
Température de stockage	-20 à 50 °C

Câbles de connexion

Entrée	120 mm (4,72 inch)
Sortie de la valve	200 mm (7,87 inch)

Vent valve

Etat de la valve	Normalement ouverte (fermée lorsqu'elle est alimentée)
Connexion de vide	Adaptateur M8
Filtre entrée d'air	Bronze fritté
Dimension orifice	1,2 mm (0,05")
Plage de pression	10^{-6} mbar à 1 bar (10^{-7} Torr à 760 Torr)
Adaptateur entrée d'air	Ø 6,35 mm (¼ inch)
Leak rate	≤ $1x10^{-7}$ mbar l/s
Durée de vie	1 million de cycles
Tension d'entrée	24 Vdc ± 10%
Puissance	2,5 W
Température de "bakeout"	60 °C
Poids	140 g (0,3 lbs)

Les dimensions d'encombrement de la valve sont indiquées sur la figure ci-après.

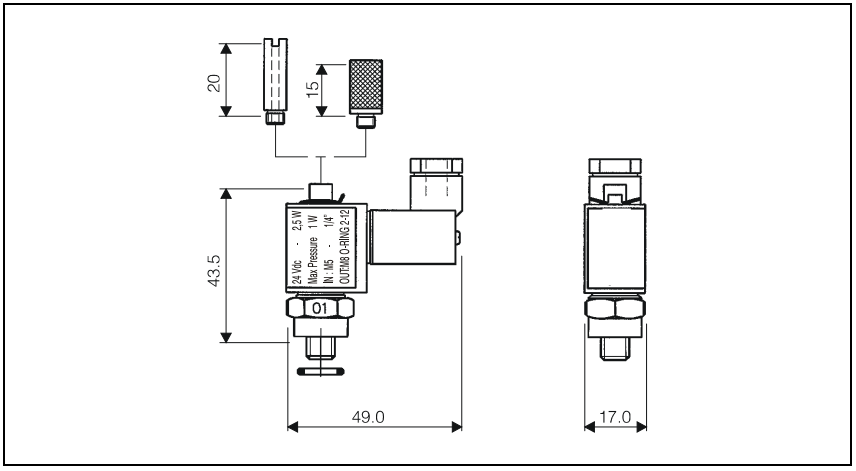


Figure 1 Dimensions en mm

Installation

Les éléments composant le kit TV 141 Navigator Vent Valve sont illustrés sur la figure ci-après. Ces éléments sont livrés désassemblés; par conséquent le client devra effectuer l'assemblage du kit.

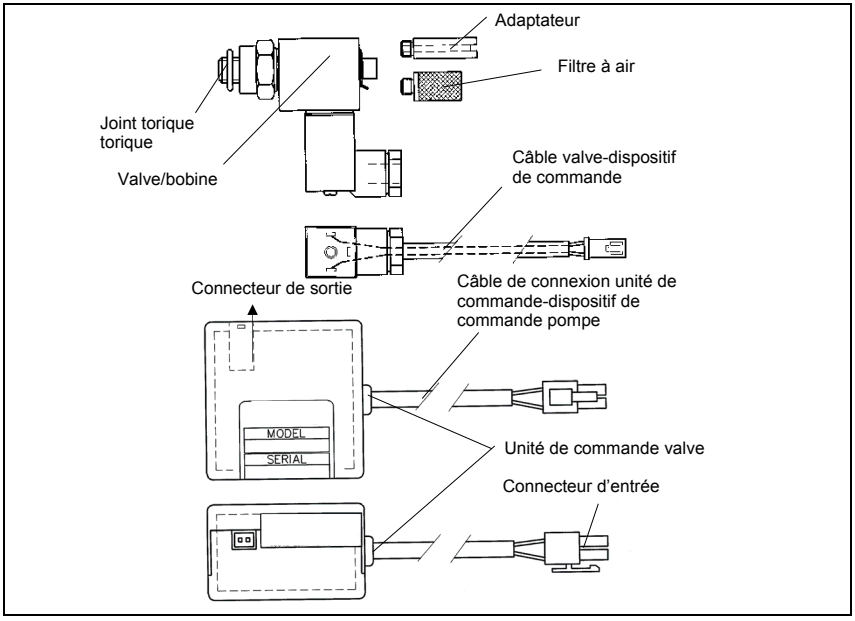


Figure 2 Eléments du kit

ATTENTION! En cours d'assemblage du kit faire attention à ne pas dévisser la douille et l'écrou de fixation de la bobine interne de la valve.

Après avoir terminé l'assemblage, installer le kit.

Déposer le bouchon à vis situé sur la pompe, puis fixer la valve à la pompe au moyen d'une clé à six pans de 16 mm et serrer l'écrou au couple de 2,5 Nm.

La figure ci-après illustre un exemple d'installation.

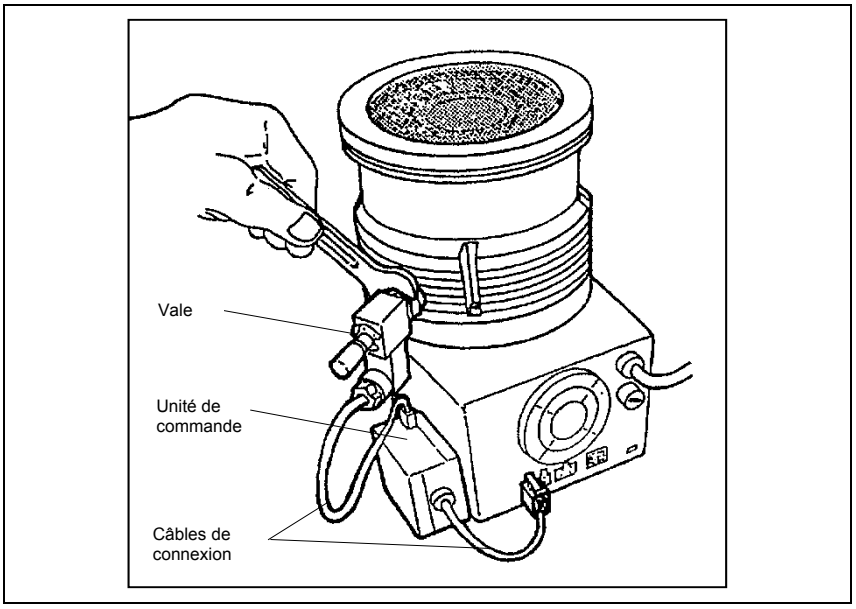


Figure 3 Installation

ATTENTION! Pour éviter tout endommagement de la pompe ne pas serrer l'écrou à un couple supérieur à 2,5 Nm.

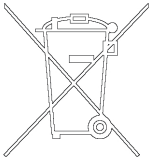
Après avoir terminé l'installation mécanique, brancher le câble de connexion de la valve sur l'unité de commande et le câble de connexion de l'unité de commande de l'électrovanne sur le dispositif de commande de la pompe. Pour fixer le boîtier du dispositif de commande utiliser le velcro livré avec le kit.

Mise au Rebut

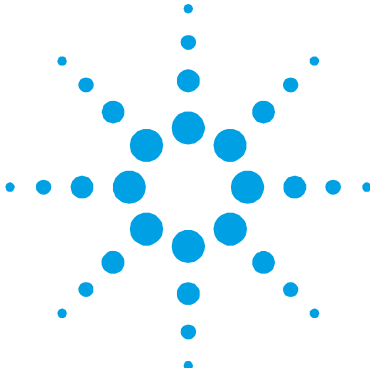
Signification du logo "WEEE" figurant sur les étiquettes.

Le symbole ci-dessous est appliqué conformément à la directive CE nommée "WEEE".

Ce symbole **(uniquement valide pour les pays de la Communauté européenne)** indique que le produit sur lequel il est appliqué NE doit PAS être mis au rebut avec les ordures ménagères ou les déchets industriels ordinaires, mais passer par un système de collecte sélective. Après avoir vérifié les termes et conditions du contrat de vente, l'utilisateur final est donc prié de contacter le fournisseur du dispositif, maison mère ou revendeur, pour mettre en oeuvre le processus de collecte et mise au rebut.



3 Procédure pour l'installation
Installation



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Original Instructions

Overview

The “TV 141 Navigator Vent Valve” kit, consisting of a control unit and valve, is a complete unit for automatic pump venting when the pump is switched off or during a power failure. The valve is normally open during power off conditions, is electromechanically activated and secured (Viton-sealed) by means of an M8 thread with related O-ring on the high vacuum port. The air input into the valve is filtered by means of a specific filter located on the valve’s own air inlet.

The control unit is powered by the Turbo-V controller which is not suitable for rack mounting.

The control unit is activated with a preset delay of approximately 0.8 seconds to avoid undesired venting during a temporary power failure and to allow the closure of the system valves before venting.

Technical Characteristics

Control Unit

Input voltage	24 Vdc ± 10%
- power (max)	2.5 W
Output voltage (max)	24 Vcc ± 10%
- power (max)	1,2 W
Delay	Approx. 0.8 seconds
Operating temperature	0 to 40 °C
Storage temperature	-20 to 50 °C

Connection Cables

Input	120 mm (4.72 inches)
Output from valve	200 mm (7.87 inches)

Vent Valve

Valve status	Normally open (closed when power is applied)
Vacuum connection	M8 thread
Air intake filter	Sintered bronze
Hole dimension	1.2 mm (0.05 inch)
Pressure ranges	10^{-6} mbar to 1 bar (10^{-7} Torr to 760 Torr)
Air intake adapter	Ø 6.35 mm (¼ inch)
Leak rate	≤ $1x10^{-7}$ mbar l/s
Life span	1 milion cycles
Input voltage	24 Vdc ± 10%
Power	2.5 W
Bakeout temperature	60 °C
Weight	140 g (0.3 lbs)

The following figure shows the valve's overall dimensions.

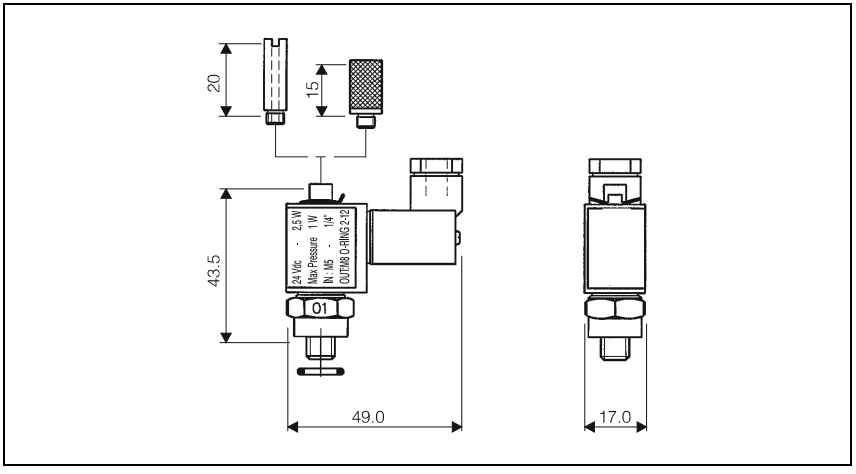


Figure 1 Dimensions in mm

Installation

The following figure shows the various components of the TV 141 Navigator Vent Valve kit. These components come disassembled and it is therefore up to the customer to assemble the kit.

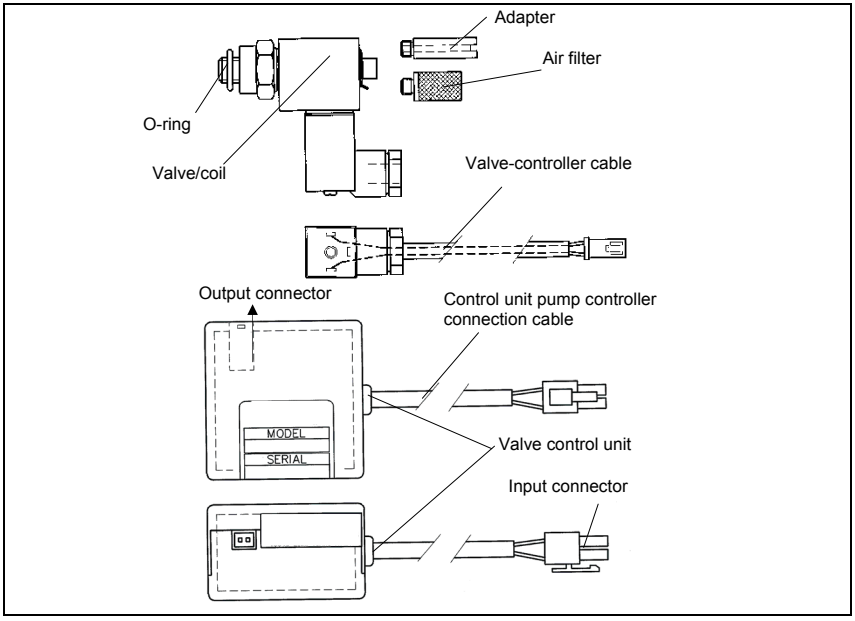


Figure 2 Kit Components

CAUTION! When assembling the kit be careful not to unscrew the coil securing ring and nut inside the valve.

Once the kit is assembled, install it on the pump.

Remove the screw cap from the pump, then secure the valve to the pump using a 16 mm wrench making sure to tighten the nut with a torque equivalent to 2.5 Nm.

The following figure shows an example of installation.

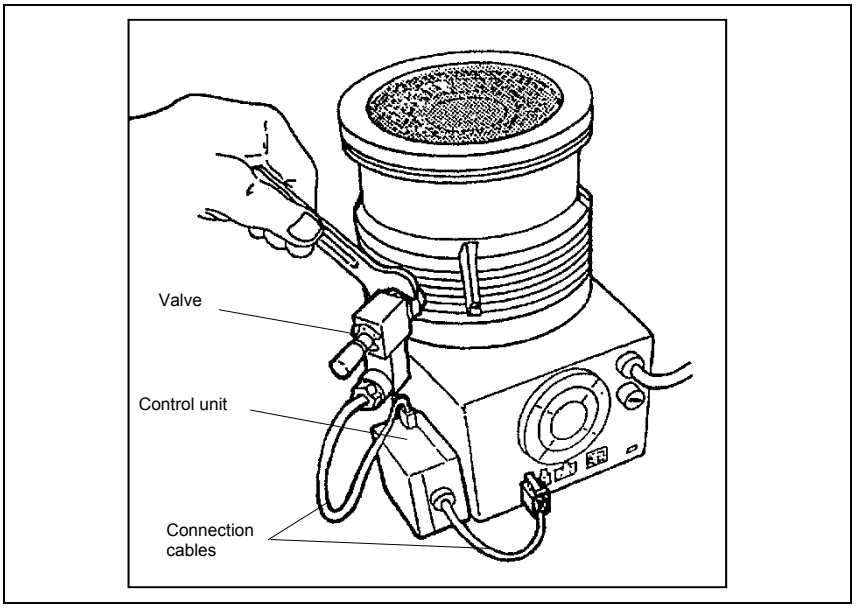


Figure 3 Installation

CAUTION! To avoid damaging the pump, do not tighten the nut with a torque greater than 2.5 Nm.

Upon completion of the mechanical installation, attach the connection cable between the valve to the control unit, and the connection cable between the electrovalve control unit to the pump's controller. Use the velcrose provided to secure the controller box.

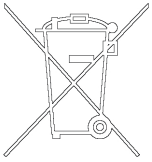
Disposal

Meaning of the "WEEE" logo found in labels

The following symbol is applied in accordance with the EC WEEE (Waste Electrical and Electronic Equipment) Directive.

This symbol **(valid only in countries of the European Community)** indicates that the product it applies to must NOT be disposed of together with ordinary domestic or industrial waste but must be sent to a differentiated waste collection system.

The end user is therefore invited to contact the supplier of the device, whether the Parent Company or a retailer, to initiate the collection and disposal process after checking the contractual terms and conditions of sale.



Agilent Technologies

Vacuum Products Division

Dear Customer,

Thank you for purchasing an Agilent vacuum product. At Agilent Vacuum Products Division we make every effort to ensure that you will be satisfied with the product and/or service you have purchased.

As part of our Continuous Improvement effort, we ask that you report to us any problem you may have had with the purchase or operation of our products. On the back side you find a Corrective Action request form that you may fill out in the first part and return to us.

This form is intended to supplement normal lines of communications and to resolve problems that existing systems are not addressing in an adequate or timely manner.

Upon receipt of your Corrective Action Request we will determine the Root Cause of the problem and take the necessary actions to eliminate it. You will be contacted by one of our employees who will review the problem with you and update you, with the second part of the same form, on our actions.

Your business is very important to us. Please, take the time and let us know how we can improve.

Sincerely.

Giampaolo LEVI

Vice President and General Manager
Agilent Vacuum Products Division

Note: Fax or mail the Customer Request for Action (see backside page) to Agilent Vacuum Products Division (Torino) – Quality Assurance or to your nearest Agilent representative for onward transmission to the same address.

CUSTOMER REQUEST FOR CORRECTIVE / PREVENTIVE / IMPROVEMENT ACTION

TO: AGILENT VACUUM PRODUCTS DIVISION TORINO – QUALITY ASSURANCE

FAX N°: XXXX-011-9979350

ADDRESS: AGILENT TECHNOLOGIES ITALIA S.p.A. – Vacuum Products Division –

Via F.lli Varian, 54 – 10040 Leinì (TO) – Italy

E-MAIL: vpd-qualityassurance_pdl-ext@agilent.com

NAME	COMPANY	FUNCTION

ADDRESS:

TEL. N° : _____ FAX N° : _____

E-MAIL: _____

PROBLEM / SUGGESTION :

REFERENCE INFORMATION (model n°, serial n°, ordering information, time to failure after installation, etc.):

DATE _____

CORRECTIVE ACTION PLAN / ACTUATION (by AGILENT VPD) LOG N° _____

XXX = Code for dialing Italy from your country (es. 01139 from USA; 00139 from Japan, etc.)

Agilent Technologies

Agilent Technologies

Vacuum Products Division
Instructions for returning products

Dear Customer:

Please follow these instructions whenever one of our products needs to be returned.

1) Complete the attached Request for Return form and send it to Agilent Technologies (see below), taking particular care to identify all products that have pumped or been exposed to any toxic or hazardous materials.

2) After evaluating the information, Agilent Technologies will provide you with a Return Authorization (RA) number via email or fax, as requested.
Note: Depending on the type of return, a Purchase Order may be required at the time the Request for Return is submitted. We will quote any necessary services (evaluation, repair, special cleaning, eg).

3) **Important steps for the shipment of returning product:**
   - Remove all accessories from the core product (e.g. inlet screens, vent valves).
   - Prior to shipment, drain any oils or other liquids, purge or flush all gasses, and wipe off any excess residue.
   - If ordering an Advance Exchange product, **please use the packaging from the Advance Exchange to return the defective product.**
   - Seal the product in a plastic bag, and package product carefully to avoid damage in transit. You are responsible for loss or damage in transit.
   - Agilent Technologies is not responsible for returning customer provided packaging or containers.
   - **Clearly label package with RA number.** Using the shipping label provided will ensure the proper address and RA number are on the package. Packages shipped to Agilent without a RA clearly written on the outside cannot be accepted and will be returned.

4) Return only products for which the RA was issued.

5) **Product being returned under a RA must be received within 15 business days.**

6) **Ship to the location specified on the printable label, which will be sent, along with the RA number, as soon as we have received all of the required information.** Customer is responsible for freight charges on returning product.

7) Return shipments must comply with all applicable **Shipping Regulations** (IATA, DOT, etc.) and carrier requirements.

RETURN THE COMPLETED **REQUEST FOR RETURN** FORM TO YOUR NEAREST LOCATION:

EUROPE:	**NORTH AMERICA:**	**PACIFIC RIM:**
Fax: 00 39 011 9979 330		
Fax Free: 00 800 345 345 00	Fax: 1 781 860 9252	please visit our website for individual
Toll Free: 00 800 234 234 00	Toll Free: 800 882 7426, Option 3	office information
vpt-customercare@agilent.com	vpl-ra@agilent.com	http://www.agilent.com

Agilent Technologies

Vacuum Products Division
Request for Return Form
(Health and Safety Certification)

Please read important policy information on Page 3 that applies to all returns.

1) CUSTOMER INFORMATION

Company Name:	**Contact Name:**
Tel: **Email:**	**Fax:**
Customer Ship To:	**Customer Bill To:**
Europe only: **VAT reg. Number:**	USA/Canada only: ☐ **Taxable** ☐ **Non-taxable**

2) PRODUCT IDENTIFICATION

Product Description	Agilent P/N	Agilent S/N	Original Purchasing Reference

3) TYPE OF RETURN (**Choose one from each row** and supply Purchase Order if requesting a billable service)

3A. ☐ Non-Billable ☐ Billable ➡ New PO # (hard copy must be submitted with this form):

3B. ☐ Exchange ☐ Repair ☐ Upgrade ☐ Consignment/Demo ☐ Calibration ☐ Evaluation ☐ Return for Credit

4) HEALTH and SAFETY CERTIFICATION

AGILENT TECHNOLOGIES CANNOT ACCEPT ANY PRODUCTS CONTAMINATED WITH BIOLOGICAL OR EXPLOSIVE HAZARDS, RADIOACTIVE MATERIAL, OR MERCURY AT ITS FACILITY.
Call Agilent Technologies to discuss alternatives if this requirement presents a problem.

The equipment listed above (check one):

☐ **HAS NOT** pumped or been exposed to any toxic or hazardous materials. OR

☐ **HAS** pumped or been exposed to the following toxic or hazardous materials. If this box is checked, the following information must also be filled out. Check boxes for all materials to which product(s) pumped or was exposed:

☐ Toxic ☐ Corrosive ☐ Reactive ☐ Flammable ☐ Explosive ☐ Biological ☐ Radioactive

List all toxic/hazardous materials. Include product name, chemical name, and chemical symbol or formula:

_____

NOTE: If a product is received at Agilent which is contaminated with a toxic or hazardous material that was not disclosed, **the customer will be held responsible** for all costs incurred to ensure the safe handling of the product, and **is liable** for any harm or injury to Agilent employees as well as to any third party occurring as a result of exposure to toxic or hazardous materials present in the product.

Print Name: **Authorized Signature: .....** **Date:**

5) FAILURE INFORMATION:

Failure Mode (REQUIRED FIELD. See next page for suggestions of failure terms):
Detailed Description of Malfunction: (Please provide the error message)
Application (system and model):

I understand and agree to the terms of Section 6, Page 3/3.
Print Name: **Authorized Signature: .....** **Date:**

Agilent Technologies

Vacuum Products Division
Request for Return Form
(Health and Safety Certification)

Please use these Failure Mode to describe the concern about the product on Page 2.

TURBO PUMPS and TURBO CONTROLLERS

APPARENT DEFECT/MALFUNCTION		POSITION	PARAMETERS	
- Does not start	- Noise	- Vertical	Power:	Rotational Speed:
- Does not spin freely	- Vibrations	-Horizontal	Current:	Inlet Pressure:
- Does not reach full speed	-Leak	-Upside-down	Temp 1:	Foreline Pressure:
- Mechanical Contact	-Overtemperature	-Other:	Temp 2:	Purge flow:
- Cooling defective	-Clogging	.....	OPERATING TIME:	

ION PUMPS/CONTROLLERS

- Bad feedthrough	- Poor vacuum
- Vacuum leak	- High voltage problem
- Error code on display	- Other

VALVES/COMPONENTS

- Main seal leak	- Bellows leak
- Solenoid failure	- Damaged flange
- Damaged sealing area	-Other

LEAK DETECTORS

- Cannot calibrate	-No zero/high backround
- Vacuum system unstable	- Cannot reach test mode
- Failed to start	- Other

INSTRUMENTS

- Gauge tube not working	- Display problem
- Communication failure	- Degas not working
- Error code on display	- Other

SCROLL AND ROTARY VANE PUMPS

- Pump doesn't start	- Noisy pump (describe)
- Doesn't reach vacuum	- Over temperature
- Pump seized	- Other

DIFFUSION PUMPS

- Heater failure	- Electrical problem
- Doesn't reach vacuum	- Cooling coil damage
- Vacuum leak	- Other

Section 6) *ADDITIONAL TERMS*

Please read the terms and conditions below as they apply to all returns and are in addition to the Agilent Technologies Vacuum Product Division – Products and Services Terms of Sale.

- Customer is responsible for the freight charges for the returning product. Return shipments must comply with all applicable **Shipping Regulations** (IATA, DOT, etc.) and carrier requirements.
- Customers receiving an Advance Exchange product agree to return the defective, rebuildable part to Agilent Technologies **within 15 business days**. Failure to do so, or returning a non-rebuildable part (crashed), will result in an invoice for the non-returned/non-rebuildable part.
- Returns for credit toward the purchase of new or refurbished Products are subject to prior Agilent approval and may incur a restocking fee. Please reference the original purchase order number.
- Units returned for evaluation will be evaluated, and a quote for repair will be issued. If you choose to have the unit repaired, the cost of the evaluation will be deducted from the final repair pricing. A Purchase Order for the final repair price should be issued within 3 weeks of quotation date. Units without a Purchase Order for repair will be returned to the customer, and the evaluation fee will be invoiced.
- A Special Cleaning fee will apply to all exposed products per Section 4 of this document.
- If requesting a calibration service, units must be functionally capable of being calibrated.

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